

RECEIVED  
CENTRAL FAX CENTER

NOV 24 2006

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please amend claims 1, 4, 10, 11, 13, 18, 19 and 21 as indicated below (material to be inserted is in **bold and underline**, material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[ ]]):

Listing of Claims:

1. (Currently Amended) A method of ~~preparing a surface for adhesion~~  
**creating a bond between a substrate and an adhesive**, the method comprising:

providing an initiator ~~in the form of precursors of structures formed by ablation of~~  
**to a substrate, the initiator** ~~which is~~ configured to shadow a portion of a surface of [[a]]  
the substrate;

directing a laser toward the surface of the substrate to effect ablation of a non-  
shadowed portion of the substrate, forming structures on the surface of the substrate;  
and

applying an adhesive to the surface of the substrate **after formation of the**  
**structures**.

Page 4 - RESPONSE TO OFFICE ACTION  
Serial No. 10/052,815  
HP Docket No. 10012053-1  
KH Docket No. HPCC 321

2. (Previously Presented) The method of claim 1, wherein providing an initiator includes resettling ablation debris, which results from initial ablation of the surface of the substrate, on the surface of the substrate where the ablation debris has a higher ablation threshold than the surface of the substrate.

3. (Original) The method of claim 1, wherein providing an initiator includes providing a substrate incorporating particles with an ablation threshold higher than an ablation threshold of the surface of the substrate.

4. (Currently Amended) The method of claim 3, wherein providing an initiator also includes determining the desired size, shape and density of the structures formed by ablation of the substrate, and selecting an appropriate number of particles to form the desired density of structures.

5. (Original) The method of claim 1, wherein providing an initiator includes spreading particles on the surface of the substrate where the particles have an ablation threshold higher than an ablation threshold of the surface of the substrate.

6. (Cancelled)

7. (Original) The method of claim 1, wherein the substrate is formed from a liquid crystal polymer or a polyimide.

8. (Original) The method of claim 1, wherein the substrate is formed from a polyimide.

9. (Original) The method of claim 1, wherein the substrate is an element of a print cartridge assembly.

Page 5 - RESPONSE TO OFFICE ACTION  
Serial No. 10/052,815  
HP Docket No. 10012053-1  
KH Docket No. HPCC 321

10. (Currently Amended) A method of ~~preparing a surface for adhesion~~ creating a bond between a substrate and an adhesive, the method comprising:

a first step of directing laser radiation towards the surface of the substrate to effect ablation of the substrate and create ablation debris, the ablation debris having a higher ablation threshold than the surface of the substrate;

after the first step of directing laser radiation towards the substrate surface, resettling the ablation debris on the substrate surface to shadow a portion of the surface from laser radiation;

after resettling the ablation debris on the substrate surface, a second step of further directing laser radiation towards the surface of the substrate at an intensity sufficient to cause ablation of the substrate, but not sufficient to cause substantial ablation of the debris, thereby forming structures on the surface of the substrate; and

applying an adhesive to the surface of the substrate after formation of the structures.

11. (Currently Amended) The method of claim 10, which further comprises, prior to the first step of directing laser radiation towards the substrate, providing an initiator configured to shadow a portion of the surface of the substrate.

12. (Original) The method of claim 11, wherein providing an initiator includes providing a substrate incorporating particles with an ablation threshold higher than an ablation threshold of the surface of the substrate.

13. (Currently Amended) The method of claim 11, wherein providing an initiator also includes determining ~~[[the]]~~ a desired size, shape and density of structures and selecting an appropriate number of particles to form the desired density of structures.

14. (Original) The method of claim 11, wherein providing an initiator includes spreading particles on the surface of the substrate where the particles have an ablation threshold higher than an ablation threshold of the surface of the substrate.

15. (Original) The method of claim 10, wherein the substrate is formed from a liquid crystal polymer

16. (Original) The method of claim 10, wherein the substrate is formed from a polyimide.

17. (Original) The method of claim 10, wherein the substrate is an element of a print cartridge assembly.

18. (Currently Amended) A method of ~~increasing adhesion of~~ bonding an adhesive to a substrate, the method comprising:

directing a laser at a surface of a substrate to cause ablation of the surface and formation of a first amount of ablation debris;

after formation of the first amount of ablation debris, adjusting the fluence of the laser between an ablation threshold of the substrate and an ablation threshold of the ablation debris;

after adjusting the fluence, further ablating the surface of the substrate~~[[;]]~~ so as to progressively cover~~[[ing]]~~ the surface of the substrate with a second amount of ablation debris to effect formation of raised structures on the surface of the substrate; and

applying an adhesive to the surface of the substrate after formation of the structures.

19. (Currently Amended) The method of claim 18, wherein further ablating the surface of the substrate so as to progressively cover~~[[ing]]~~ the substrate with the second amount of ablation debris includes progressively resettling the second amount of ablation debris on the surface of the substrate such that ~~a first portion of the surface is~~ increasingly covered with ablation debris ~~and a second portion of the surface is uncovered with ablation debris,~~ and ablating ~~the~~ an uncovered portion of the surface to form structures ~~in the covered portion of~~ on the surface.

20. (Original) The method of claim 18, wherein the substrate is formed from a liquid crystal polymer.

21. (Currently Amended) A method of eliminating interfacial failure between a first component and an adhesive in a print cartridge assembly, the method comprising:

directing a laser at a surface of a first component;

shadowing a portion of the surface of the first component with ~~precursors of structures~~ ablation debris formed by ablation of the surface of the first component to form a higher threshold ablation region and a lower threshold ablation region;

Page 8 - RESPONSE TO OFFICE ACTION  
Serial No. 10/052,815  
HP Docket No. 10012053-1  
KH Docket No. HPCC 321

adjusting the laser to ablate the lower threshold ablation region at a rate faster than ablation of the higher threshold ablation region in order to form structures on the surface of the first component; and

applying an adhesive to the surface of the first component after formation of the structures.

22. (Cancelled)
23. (Cancelled)
24. (Cancelled)
25. (Original) The method of claim 21, wherein the first component is a print cartridge body.
26. (Original) The method of claim 21, wherein the first component is a flex circuit.
27. (Cancelled)
28. (Cancelled)
29. (Cancelled)
30. (Cancelled)
31. (Cancelled)
32. (Cancelled)
33. (Previously Presented) The method of claim 1, wherein the structures formed on the surface of the substrate are approximately between two and five microns in height.

Page 9 - RESPONSE TO OFFICE ACTION  
Serial No. 10/052,815  
HP Docket No. 10012053-1  
KH Docket No. HPCC 321

34. (Previously Presented) The method of claim 1, wherein the surface of the substrate is a surface of a print cartridge body.

35. (Previously Presented) The method of claim 1, wherein the surface of the substrate is a surface of a flex circuit.

36. (Previously Presented) The method of claim 10, wherein the structures formed on the surface of the substrate are approximately between two and five microns in height.

Page 10 - RESPONSE TO OFFICE ACTION  
Serial No. 10/052,815  
HP Docket No. 10012053-1  
KH Docket No. HPCC 321